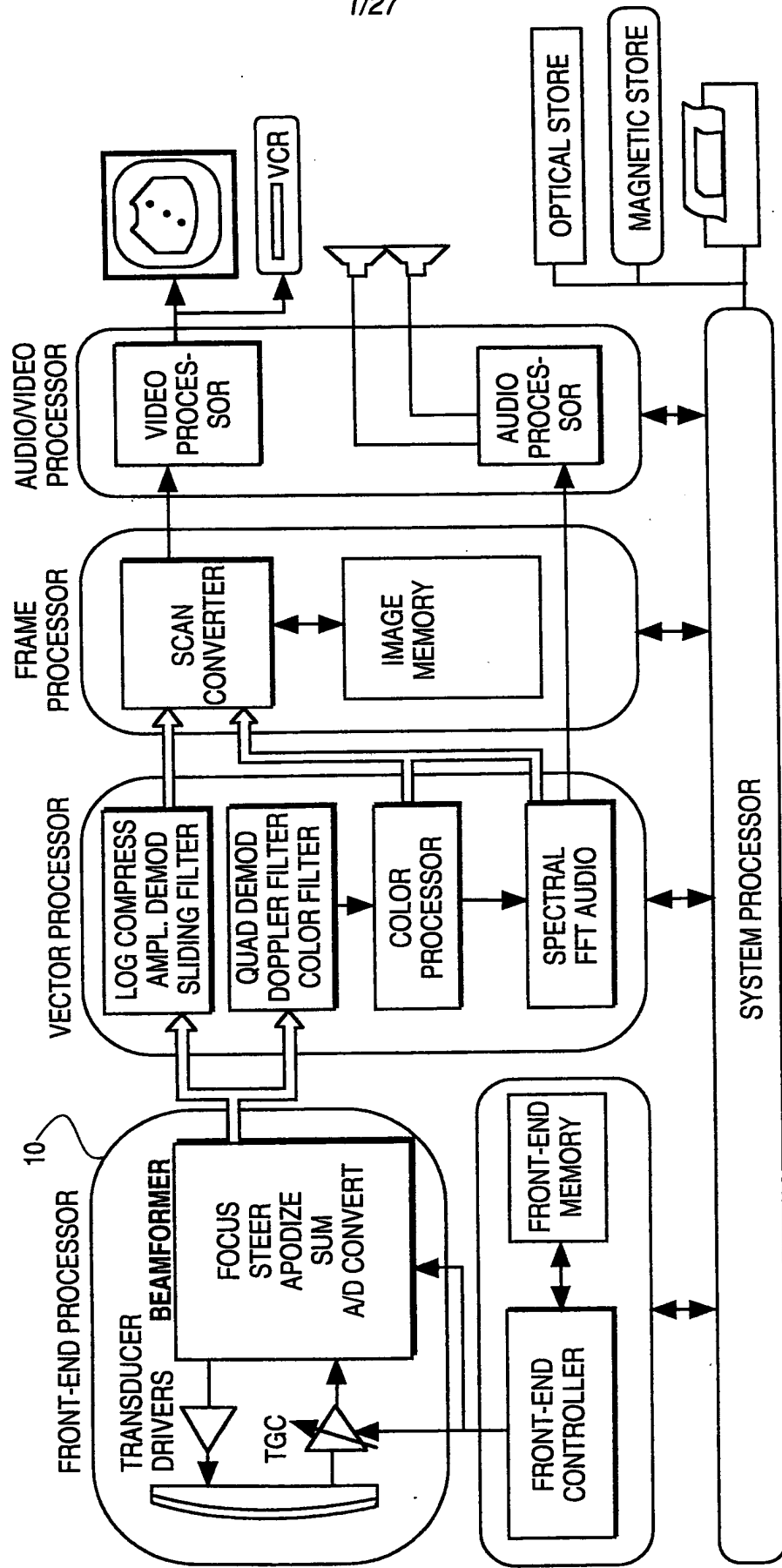


FIG. 1



ULTRASONIC IMAGING SYSTEM BLOCK DIAGRAM

FIG. 2
PRIOR ART

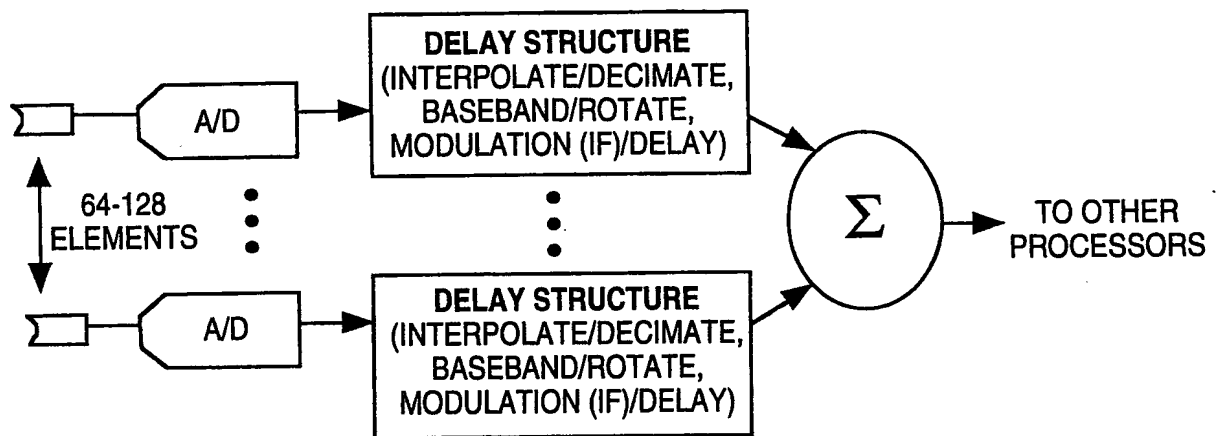


FIG. 3

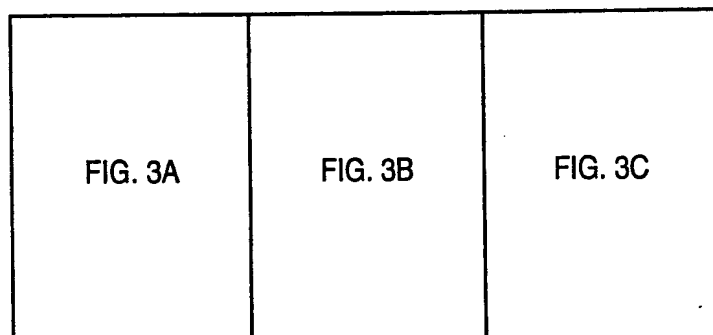
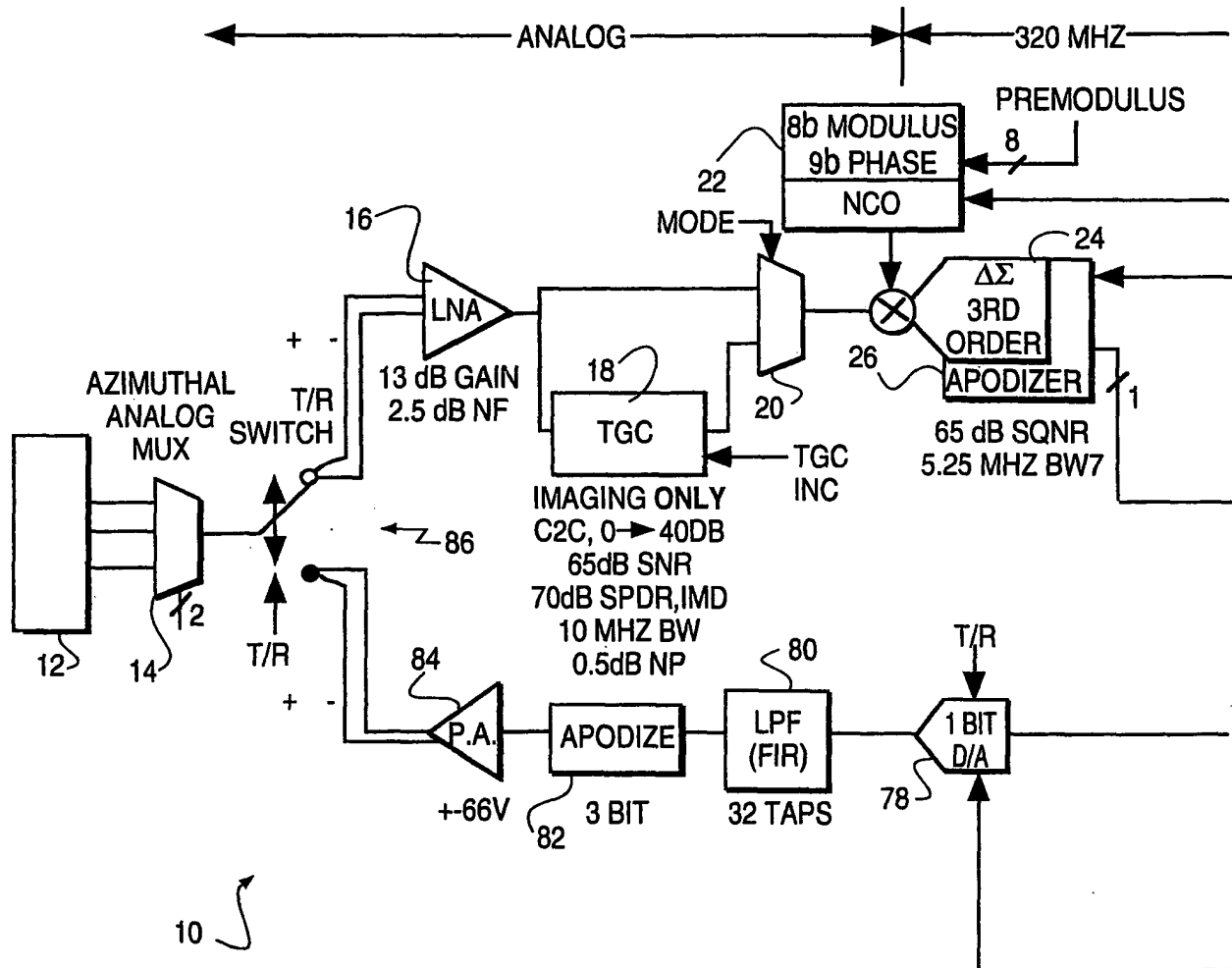


FIG. 3A



LEGEND:	
TEXT SPECIFICATIONS	
→	CONTROL LINES AND CIRCUITS THAT CHANGE DURING ONE BEAM
→	CONTROL LINES FIXED DURING A BEAM-DOUBLE BUFFERED SO PRELOAD DURING A BEAM
→	RARELY IF EVER CHANGES-POWER UP/RESET
TEXT	

FIG. 3B

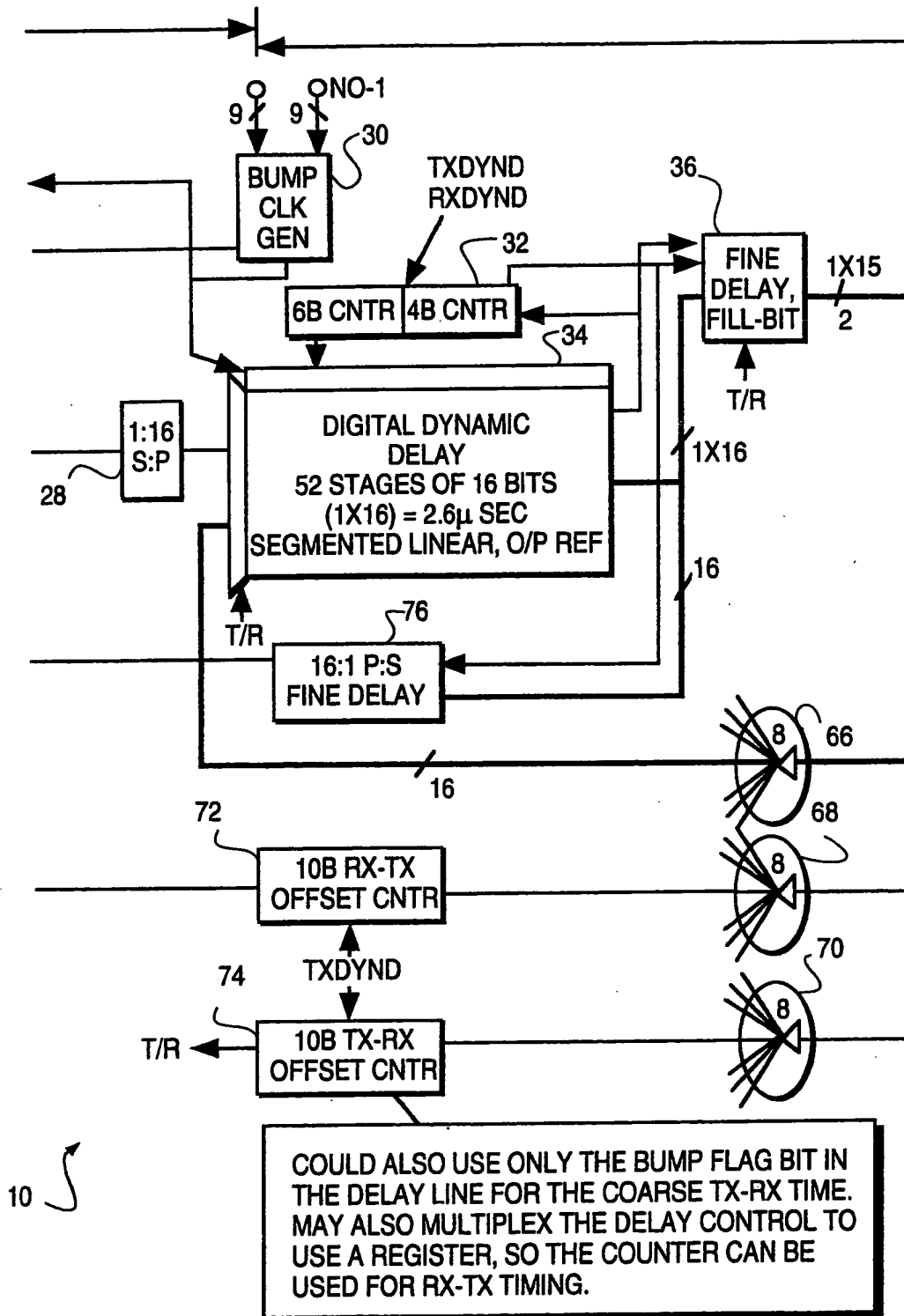
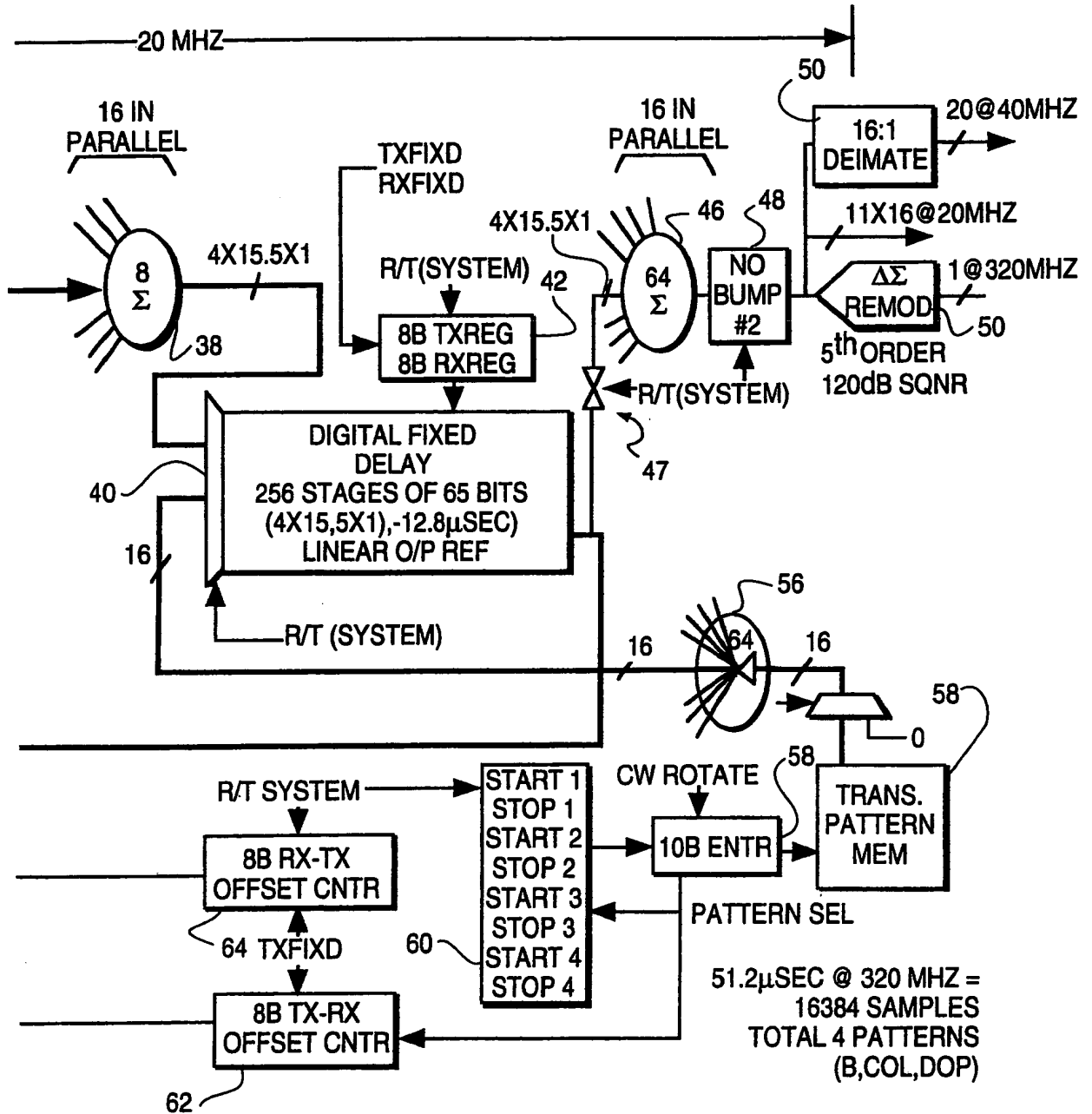


FIG. 3C



6/27

FIG. 4

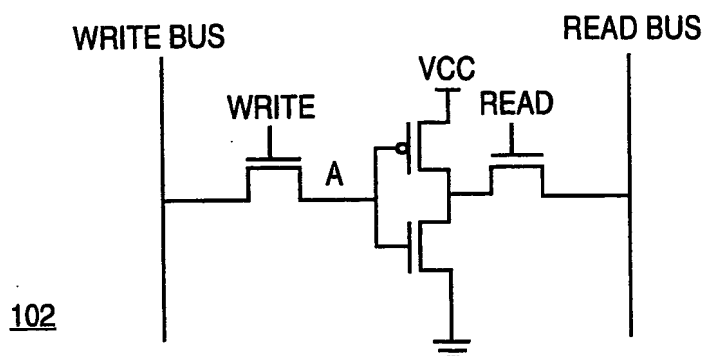


FIG. 5

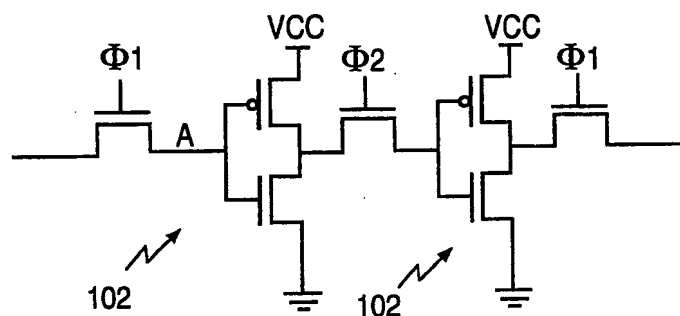


FIG. 6

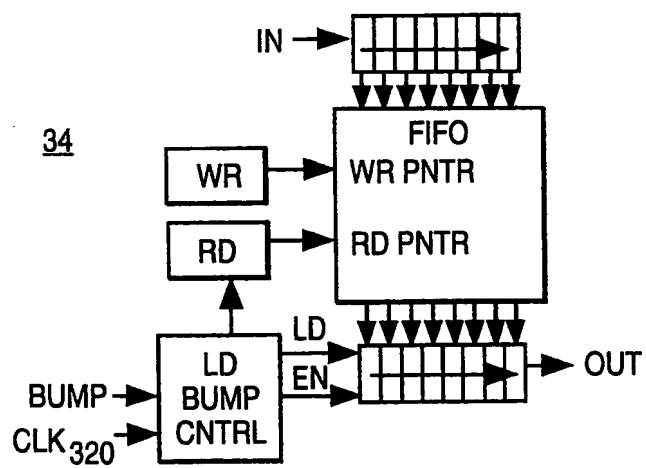


FIG. 7A

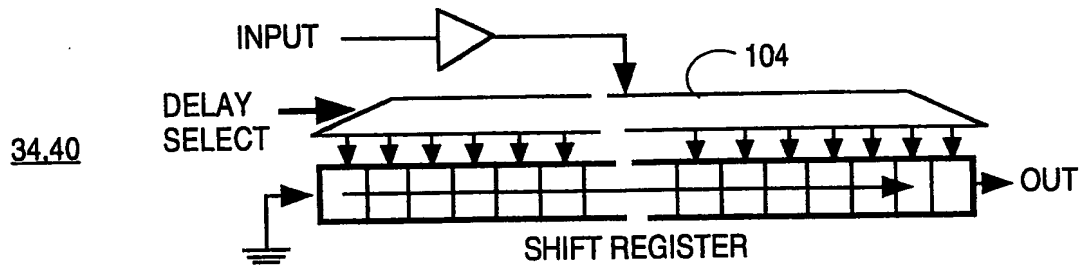


FIG. 7B

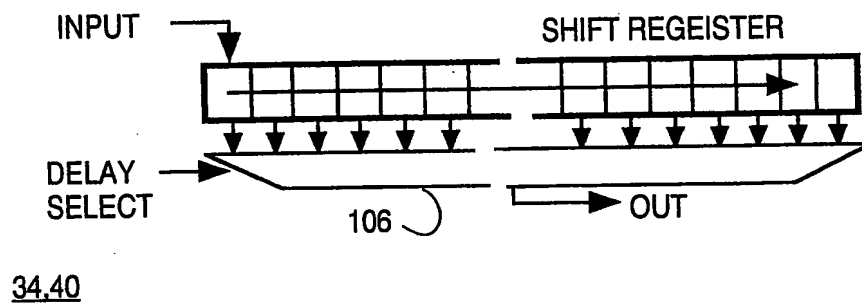


FIG. 8

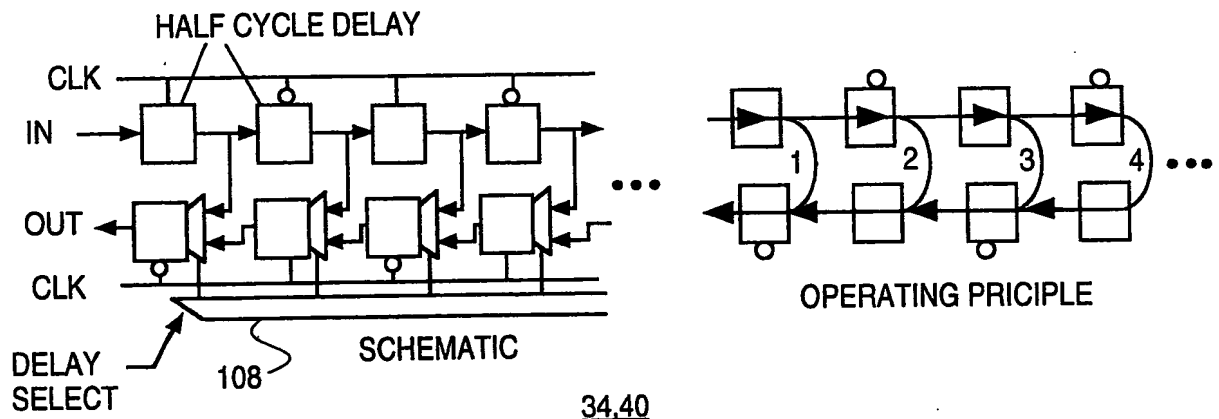
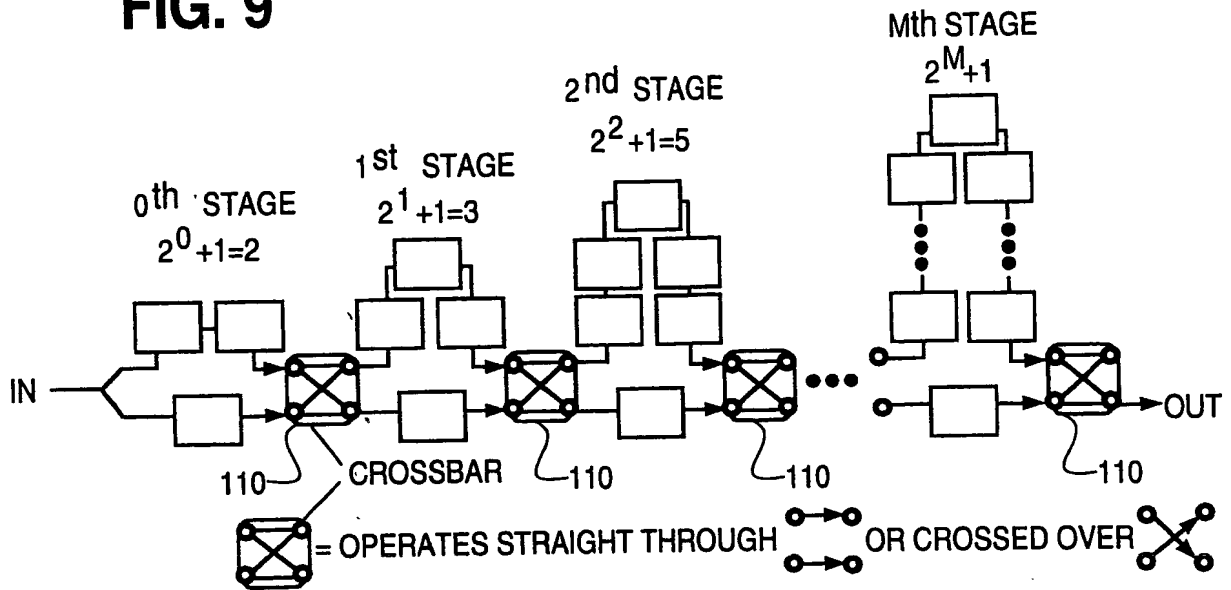


FIG. 9

8/27



34.40

FIG. 10A

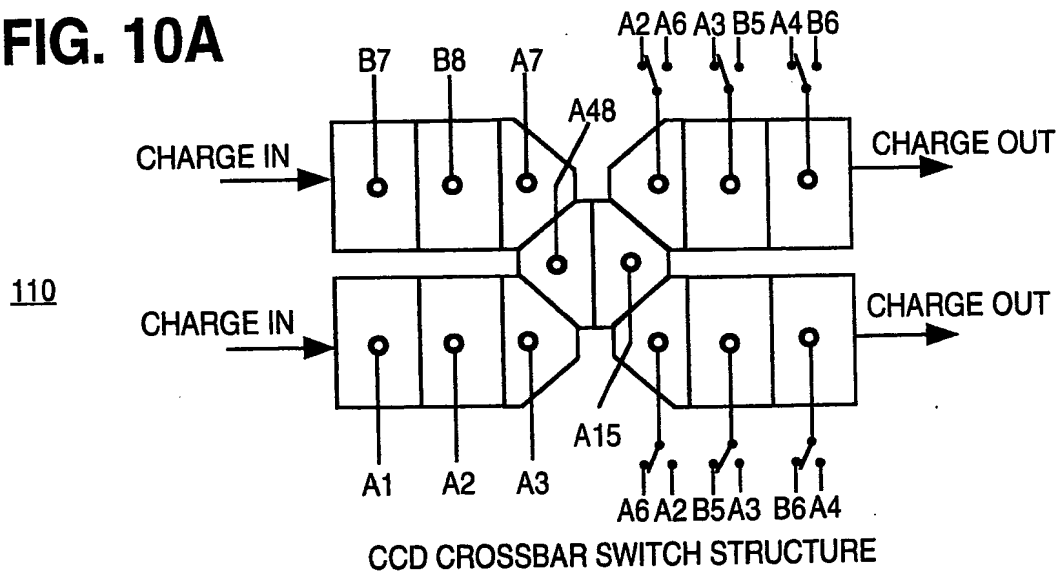


FIG. 10B

A1	A2	A3	A4	A5	A6	A7	A8	B5	B6	B7	B8	A48	A15
1	1	0	0	0	0	0	0	1	1	1	1	0	1
0	1	1	0	0	0	0	0	1	1	1	1	0	0
0	0	1	1	0	0	0	0	1	1	1	1	1	0
0	0	0	1	1	0	0	0	0	1	1	1	1	1
0	0	0	0	1	1	0	0	0	1	1	1	0	1
0	0	0	0	0	1	1	0	1	0	0	1	0	0
0	0	0	0	0	0	1	1	1	1	0	0	1	0
1	0	0	0	0	0	0	1	1	1	1	0	1	1

CLOCK PATTERN

FIG. 11

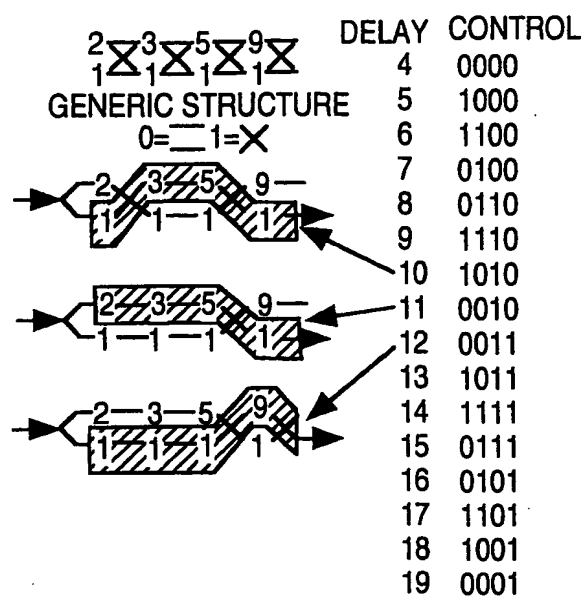


FIG. 12A

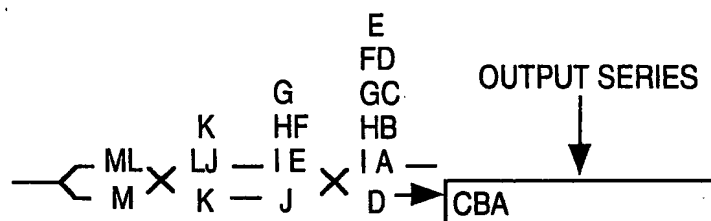


FIG. 12B

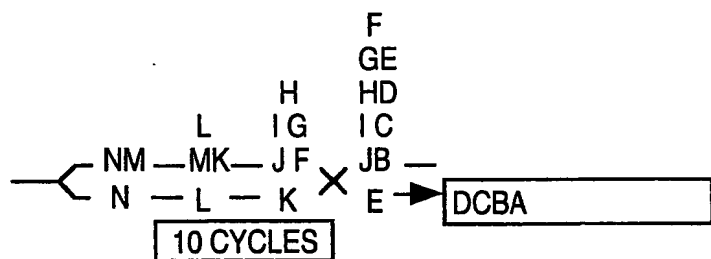


FIG. 12C

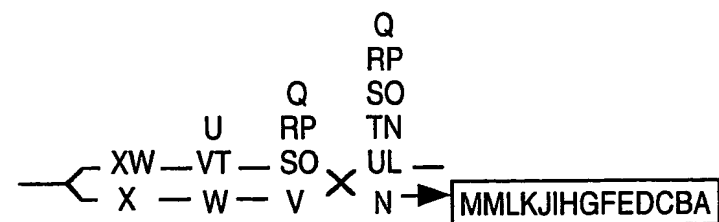


FIG. 12D

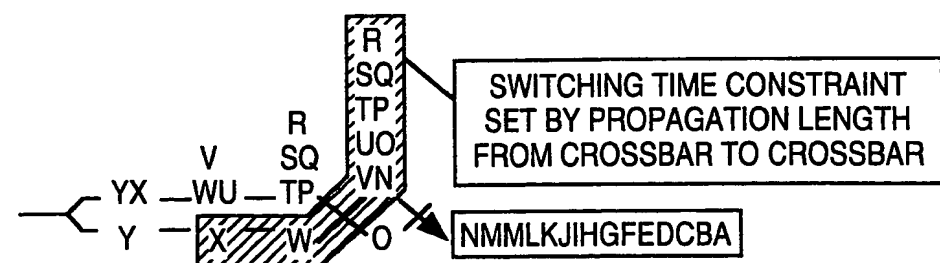


FIG. 13

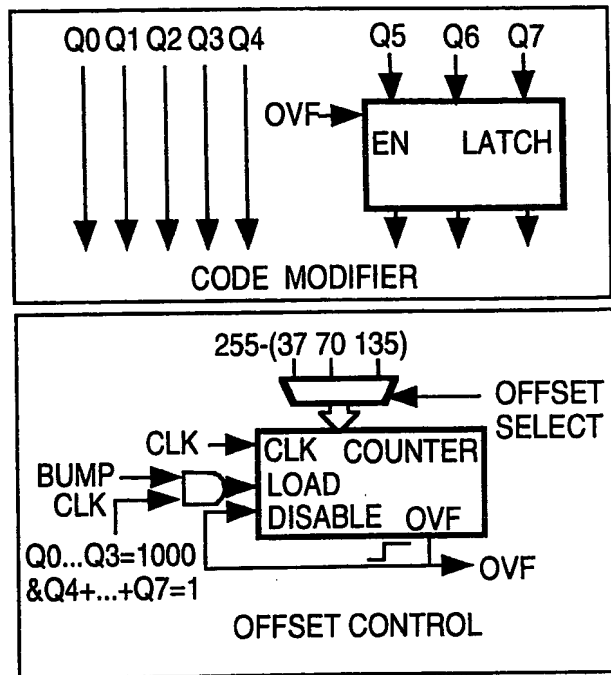
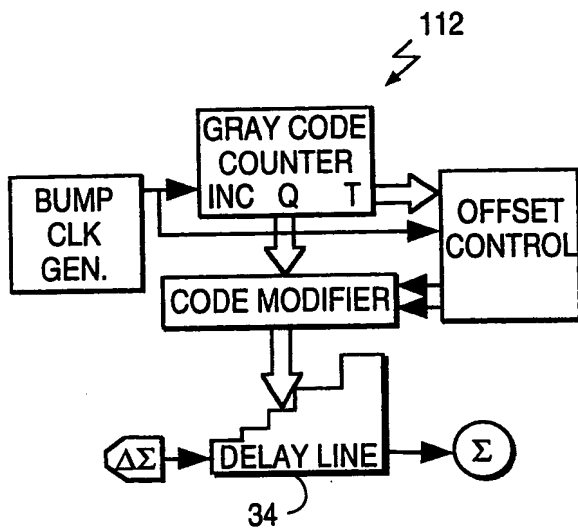


FIG. 14

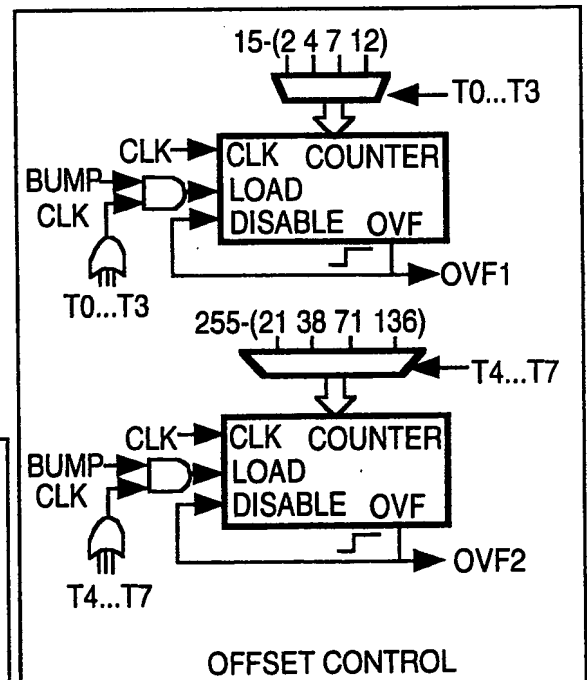
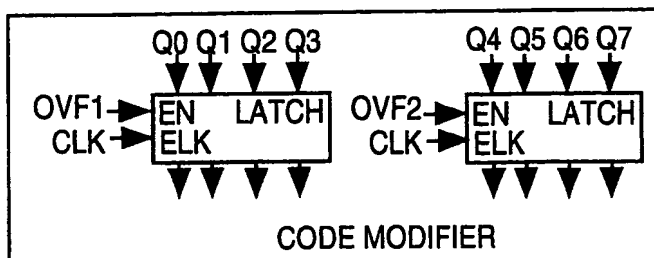
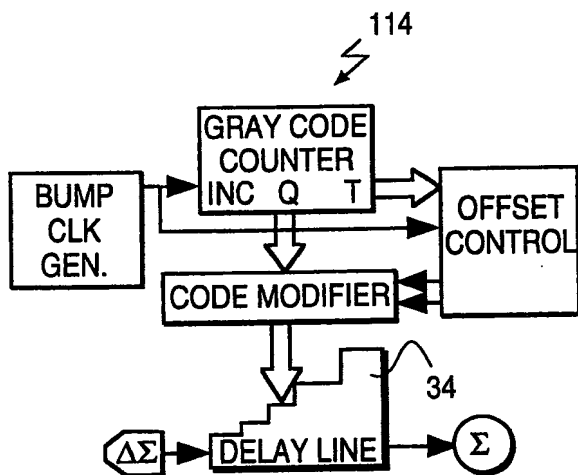


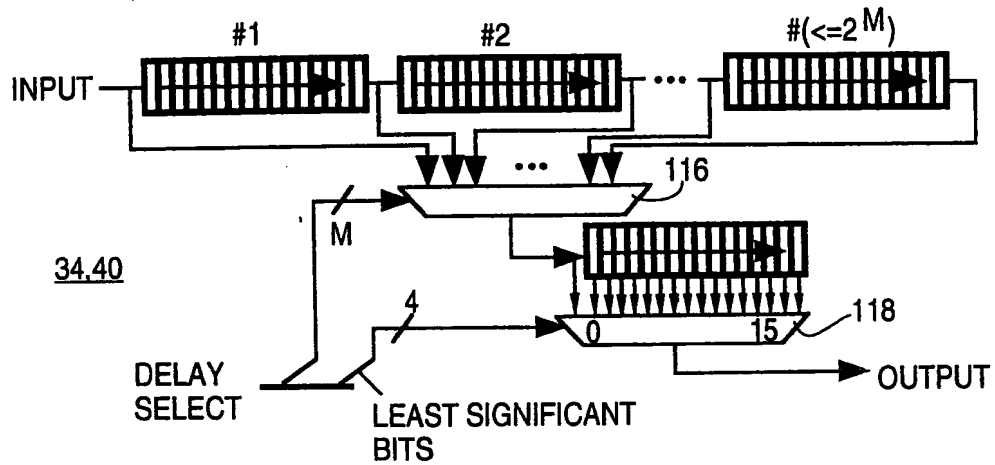
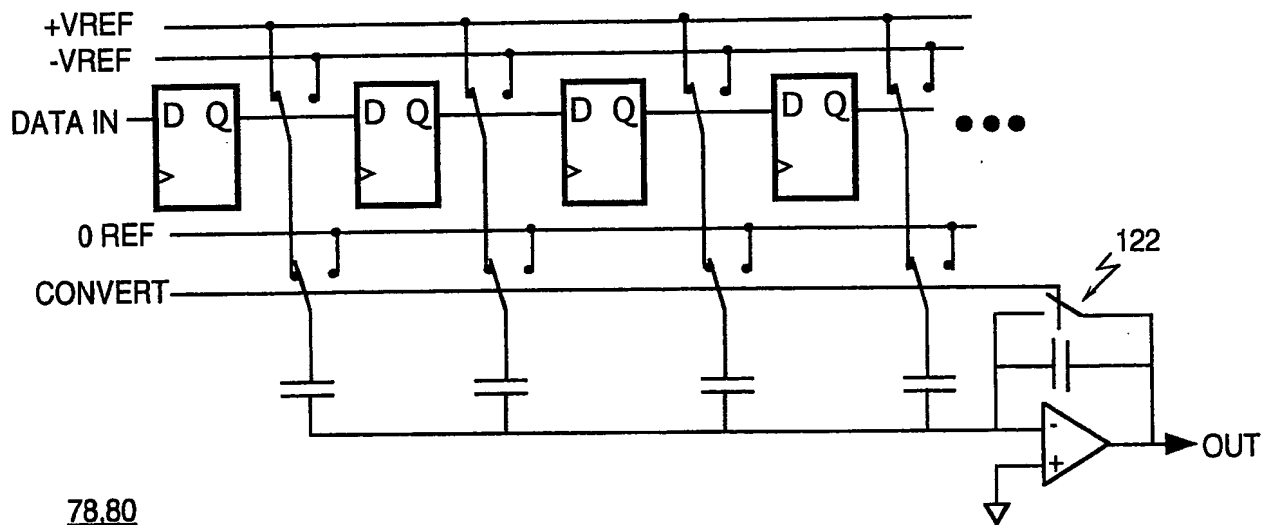
FIG. 15**FIG. 16**

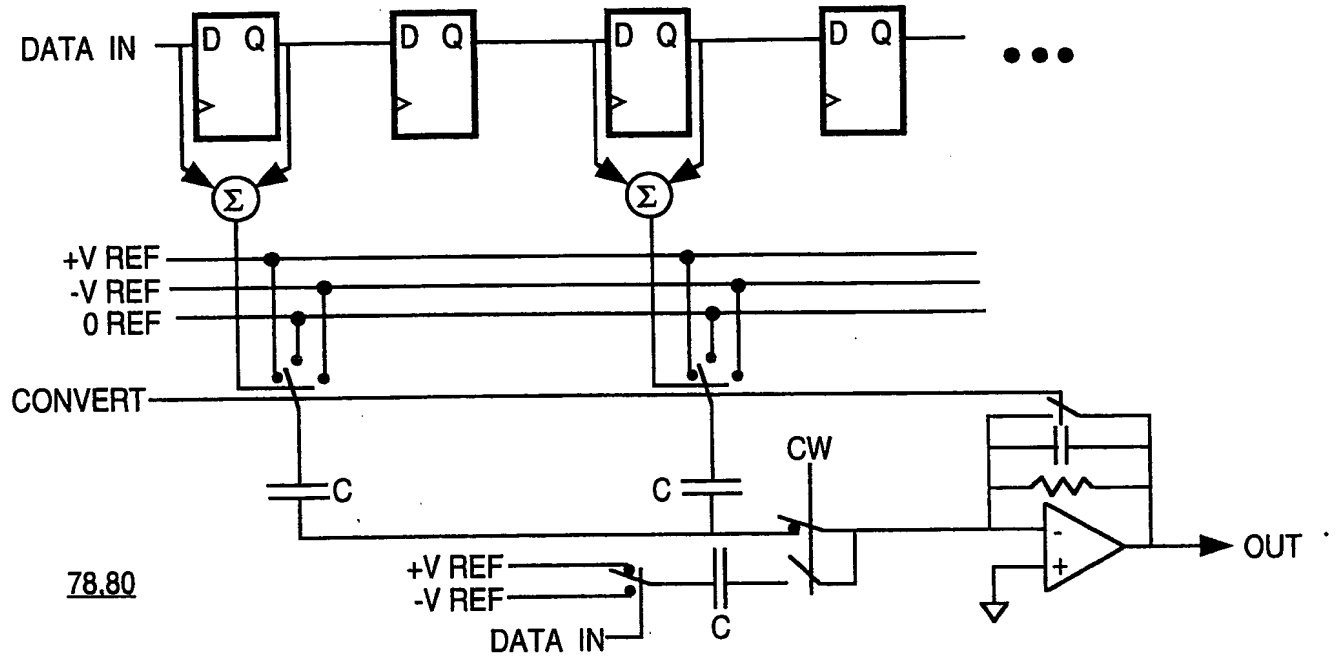
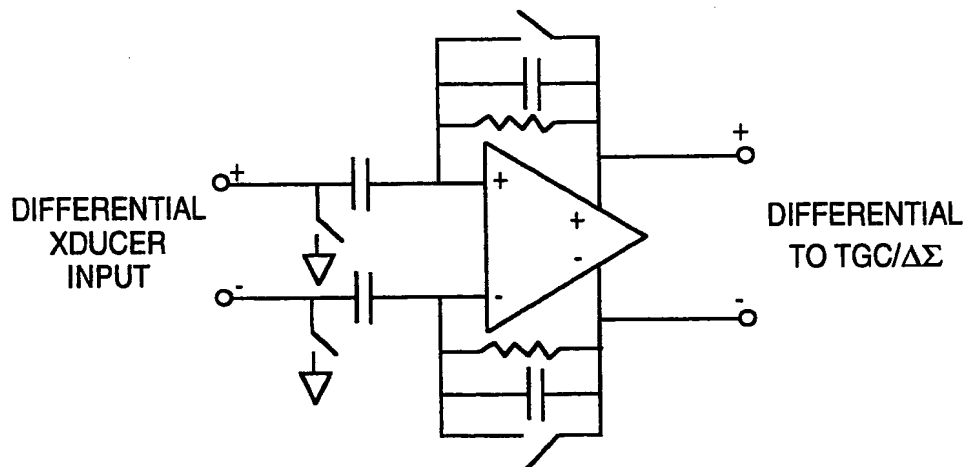
FIG. 17**FIG. 18**

FIG. 19

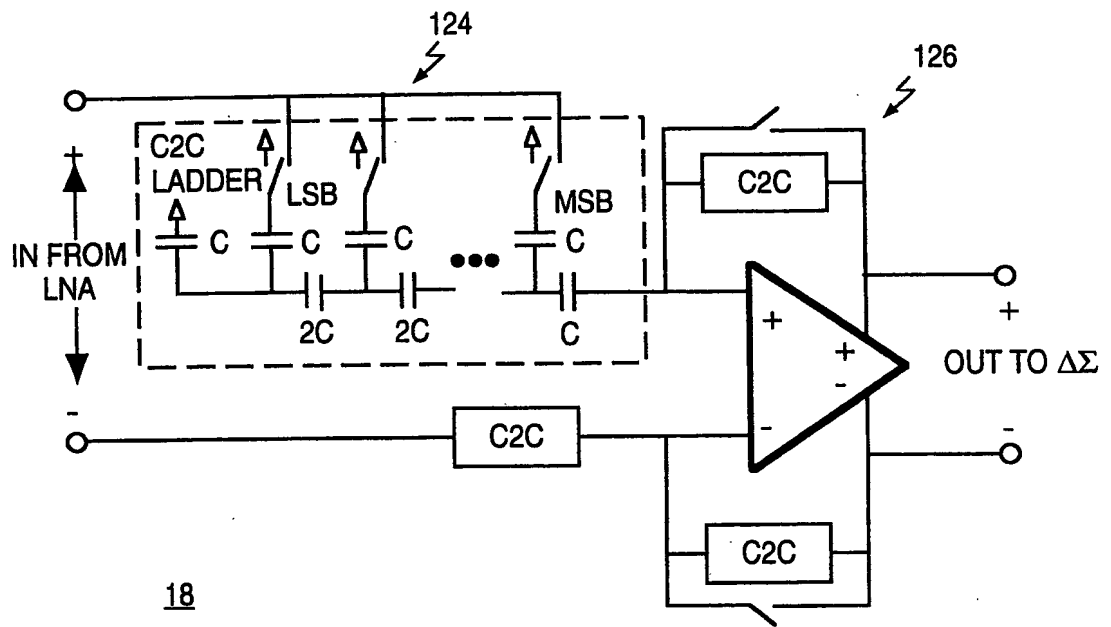


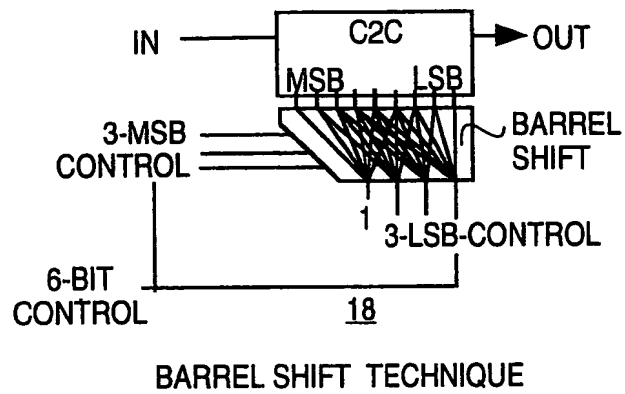
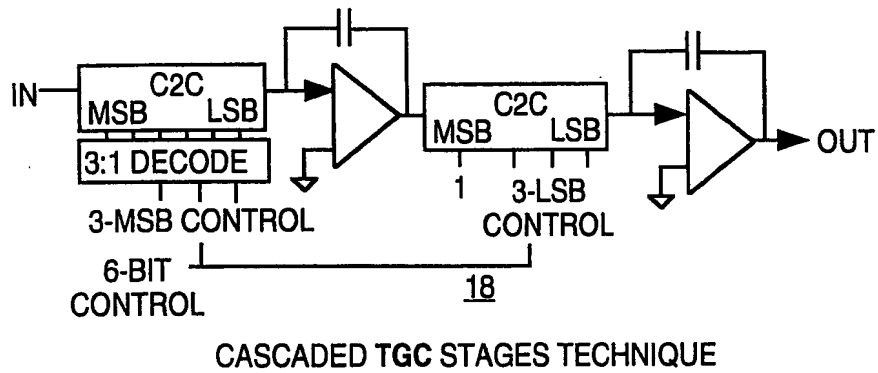
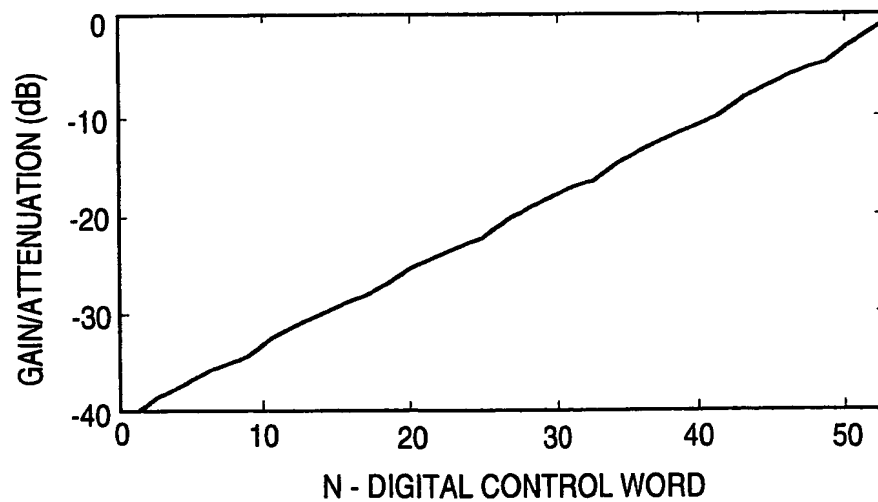
FIG. 20A**FIG. 20B****FIG. 21**

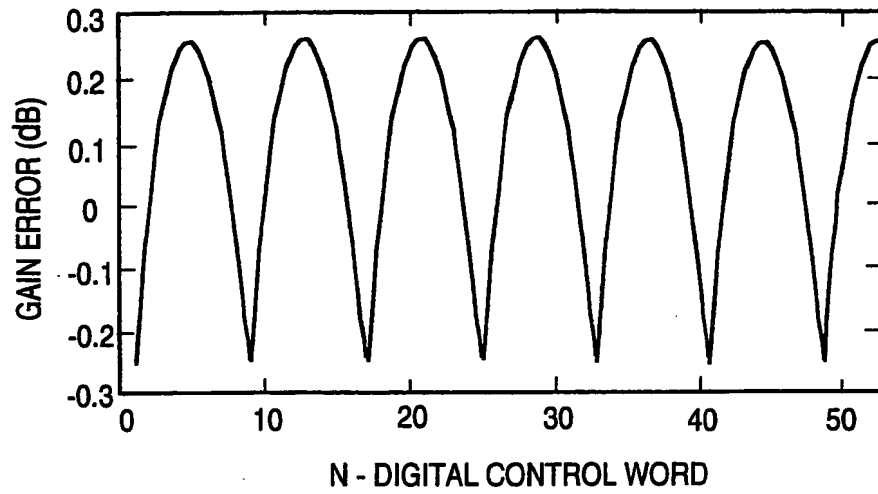
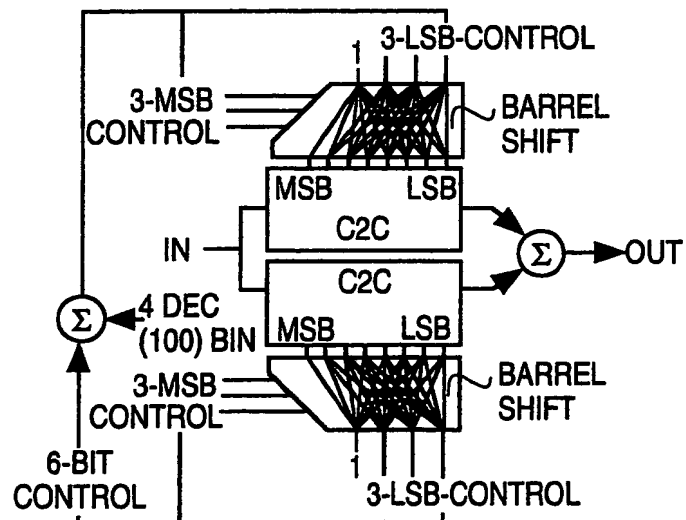
FIG. 22**FIG. 23**

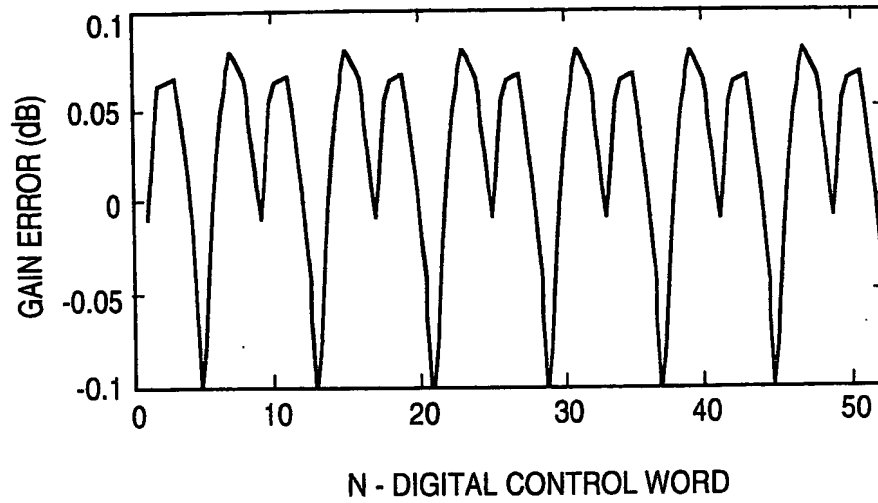
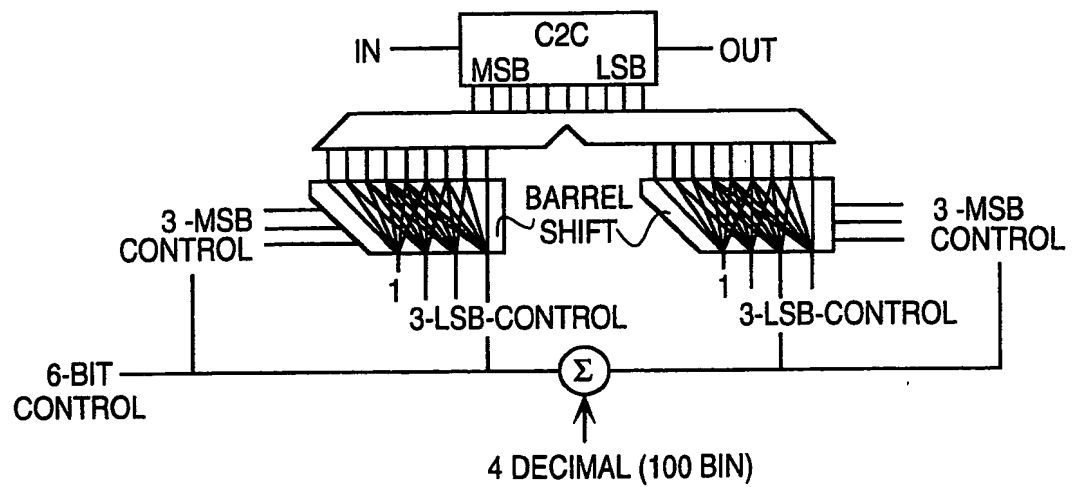
FIG. 24**FIG. 25**

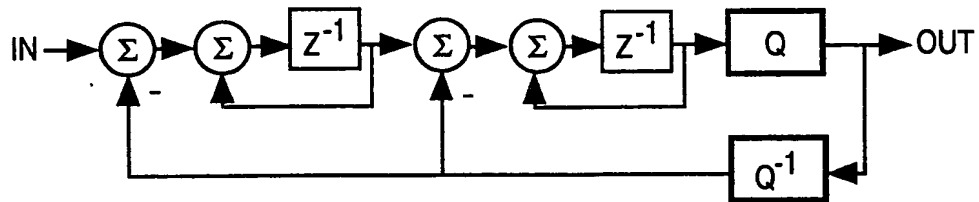
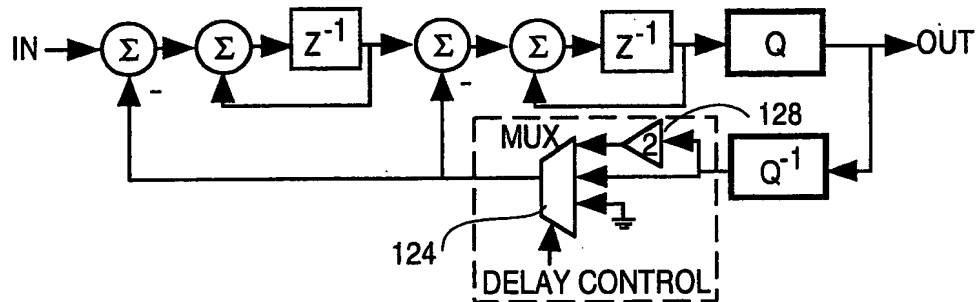
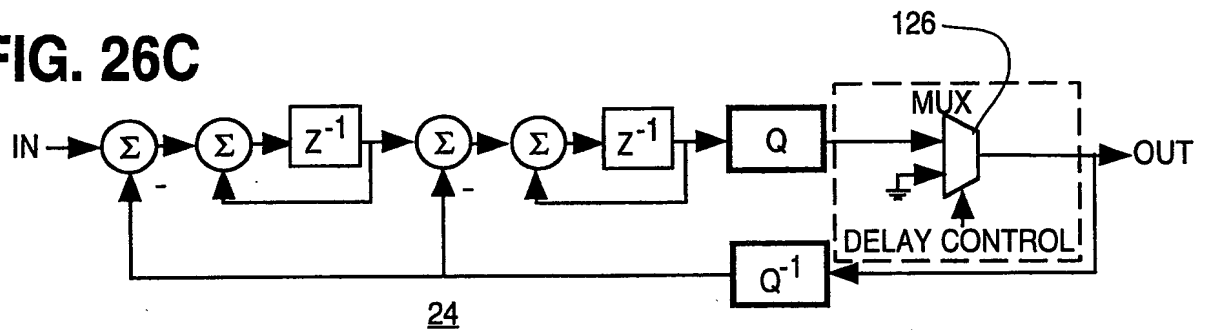
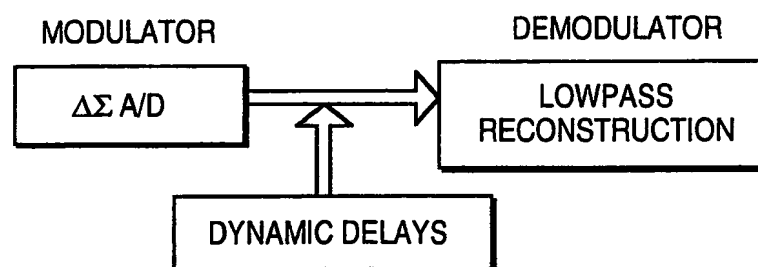
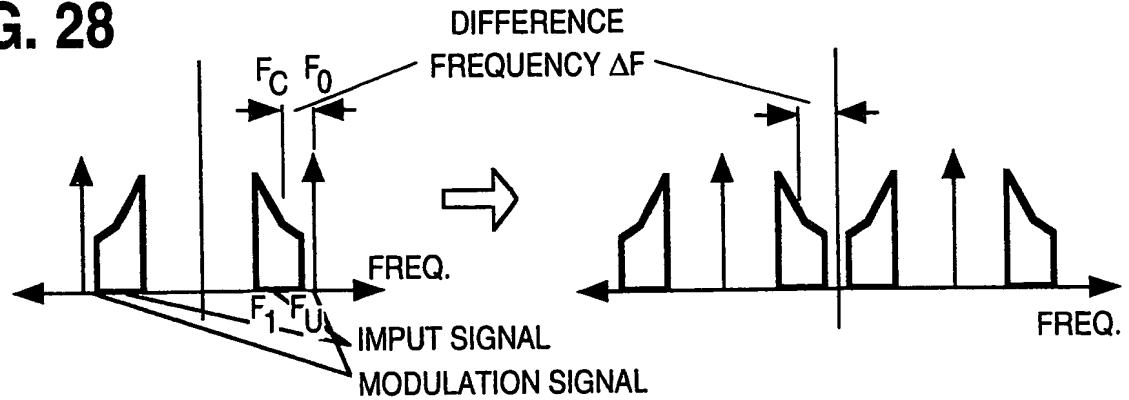
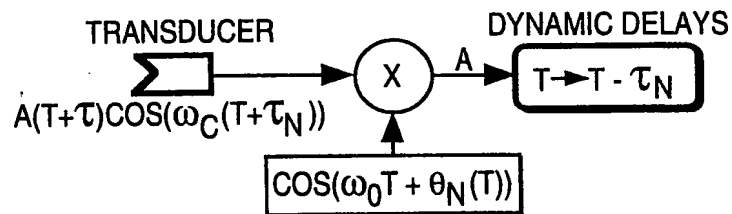
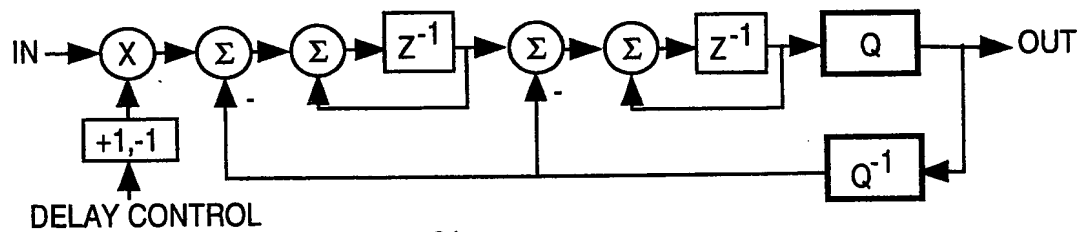
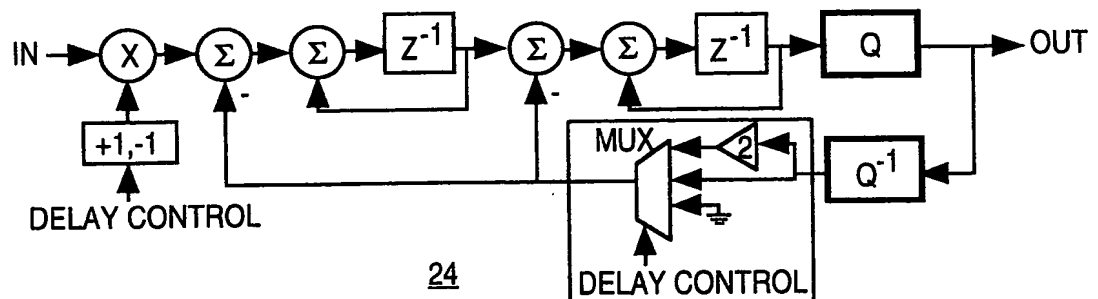
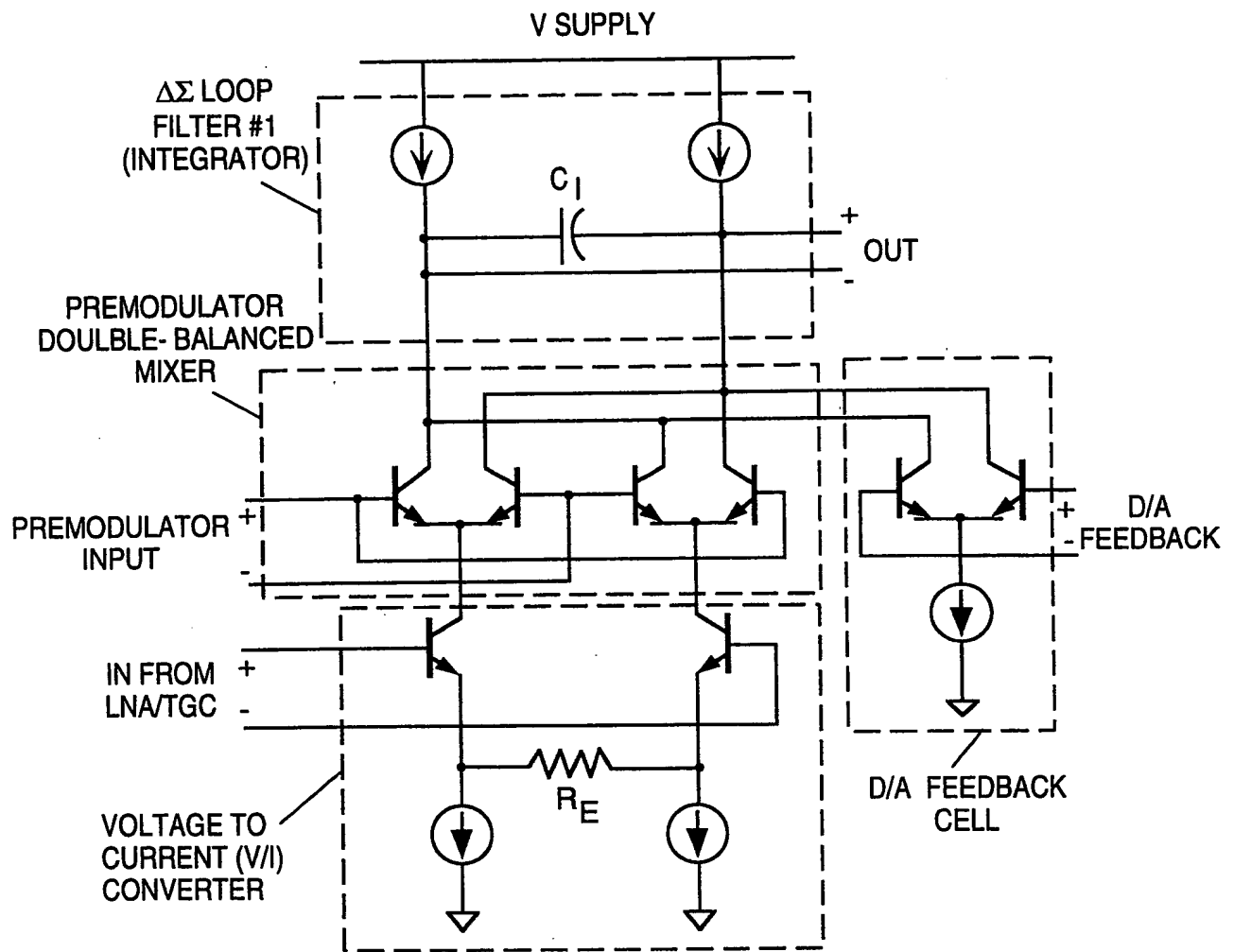
FIG. 26A**FIG. 26B****FIG. 26C****FIG. 27**

FIG. 28**FIG. 29****FIG. 30A**

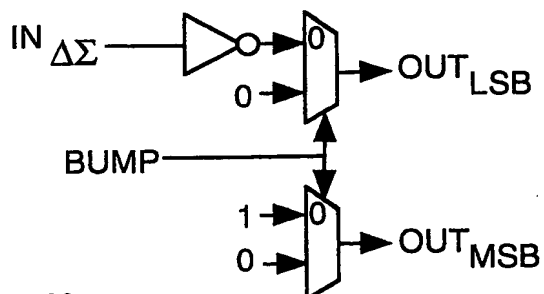
24

FIG. 30B

24

FIG. 31

24,26

FIG. 32

TRUTH TABLE		
VALUE	IN(BINARY)	OUTPUT
+1	1	10
-1	0	11
ZERO INSERT (BUMP)		00

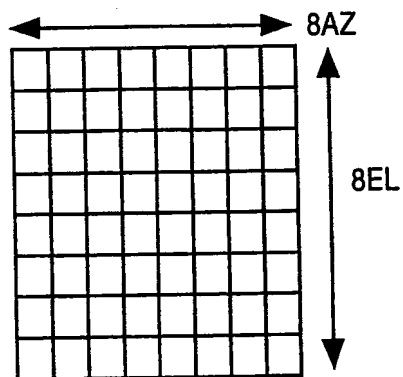
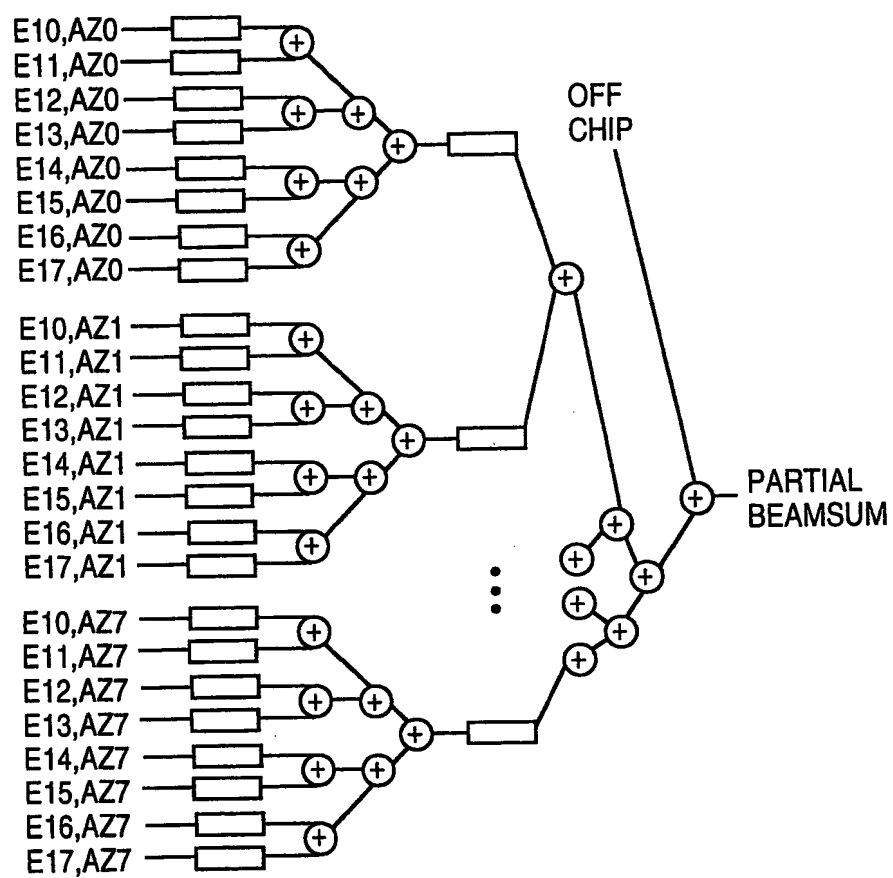
FIG. 33A**NORMAL BEAMFORMER**

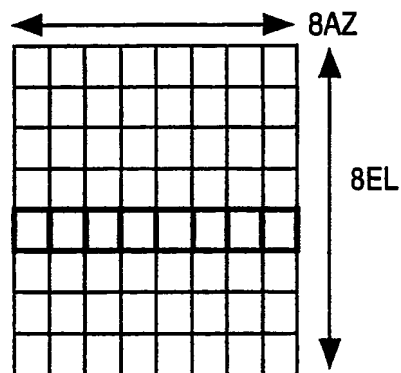
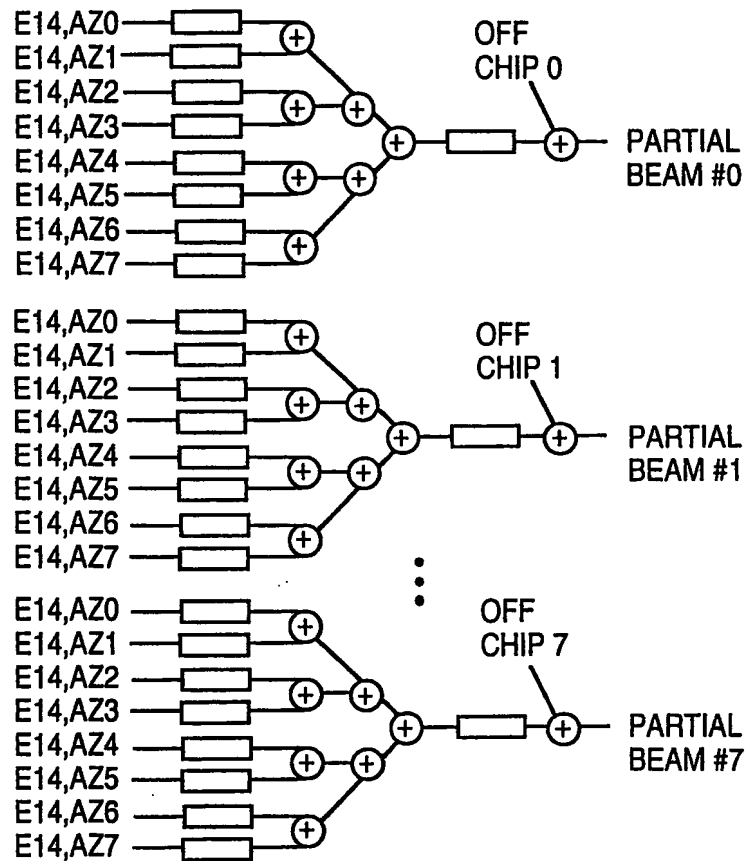
FIG. 33B**MULTIBEAM BEAMFORMER**

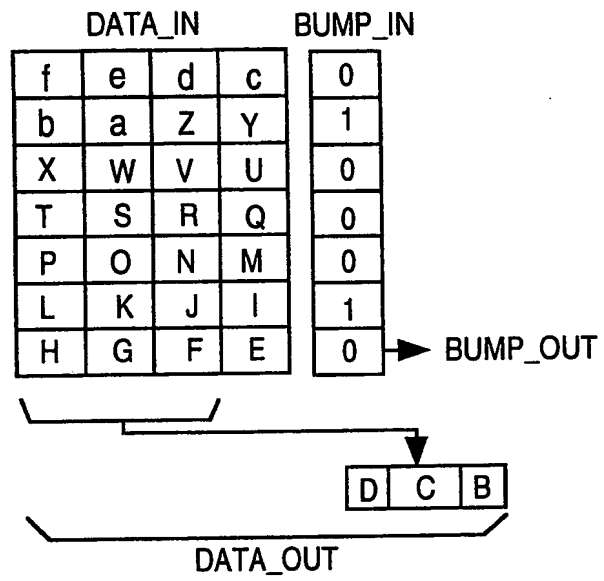
FIG. 3434.40

FIG. 35A

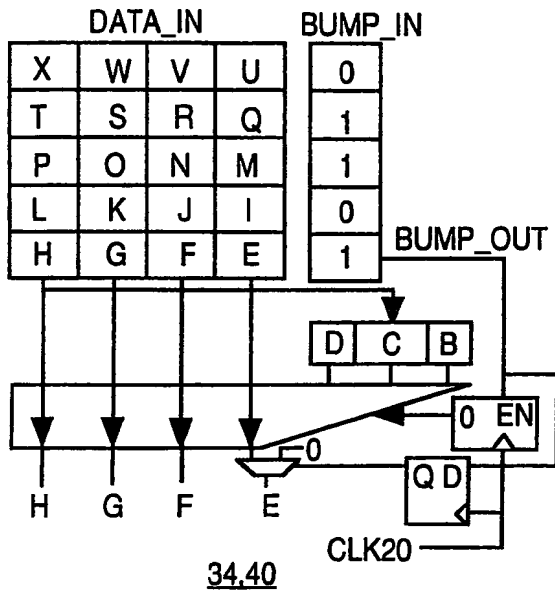


FIG. 35B

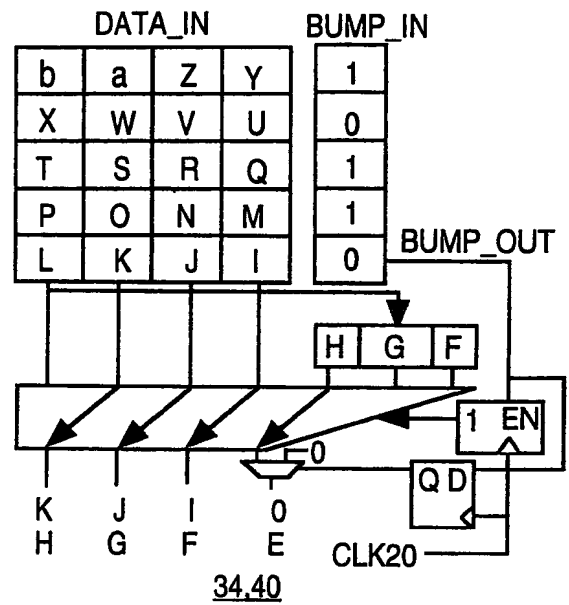


FIG. 35C

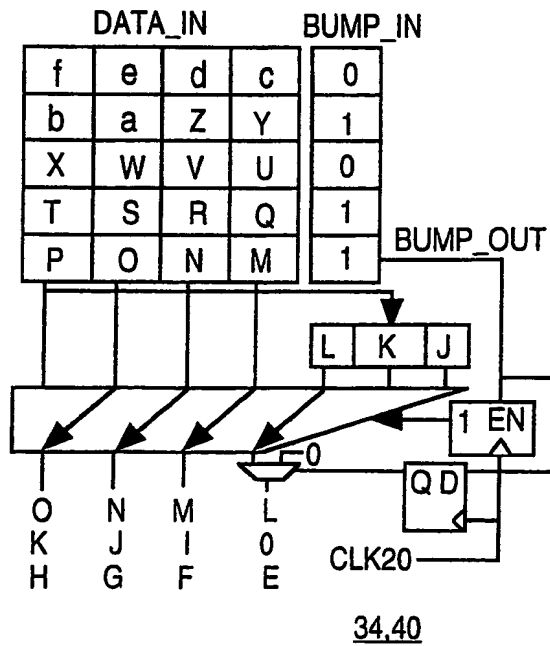
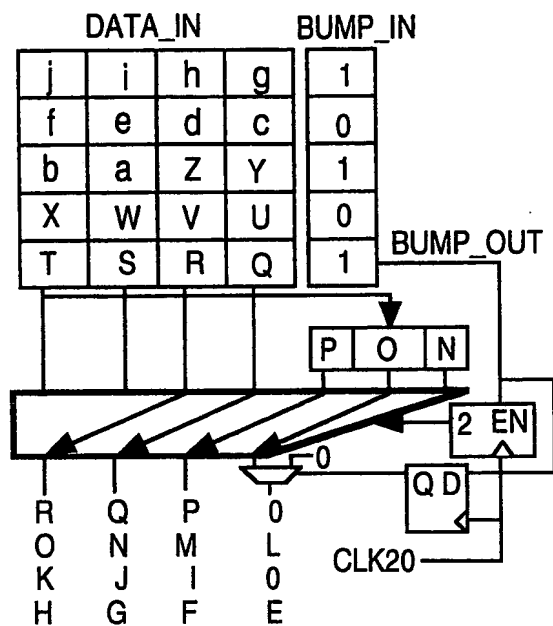
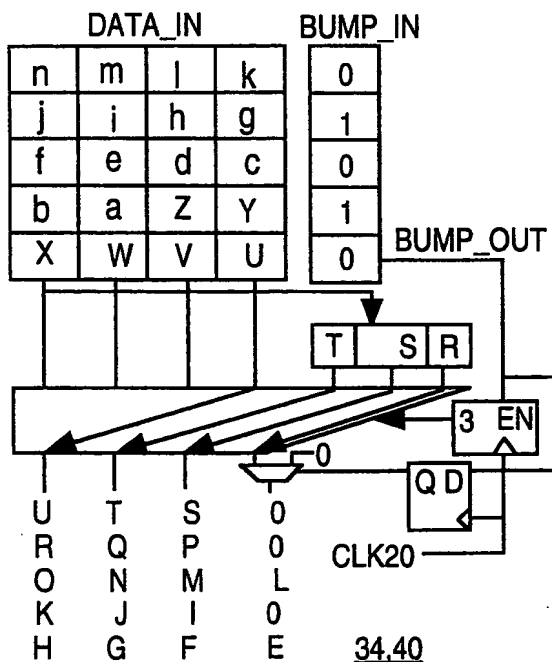


FIG. 36A



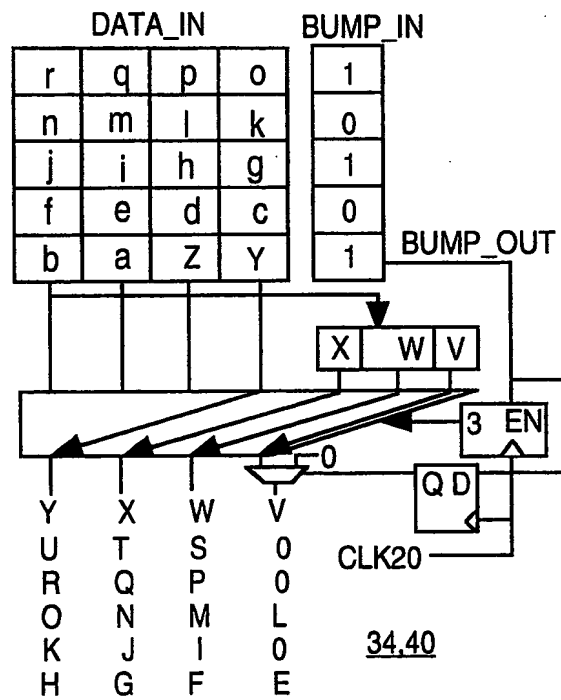
34.40

FIG. 36B



34.40

FIG. 36C



34.40

FIG. 37A

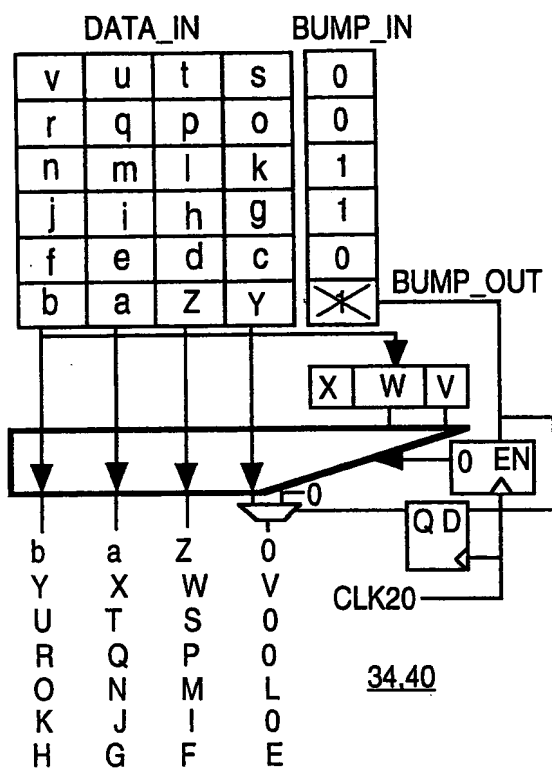


FIG. 37B

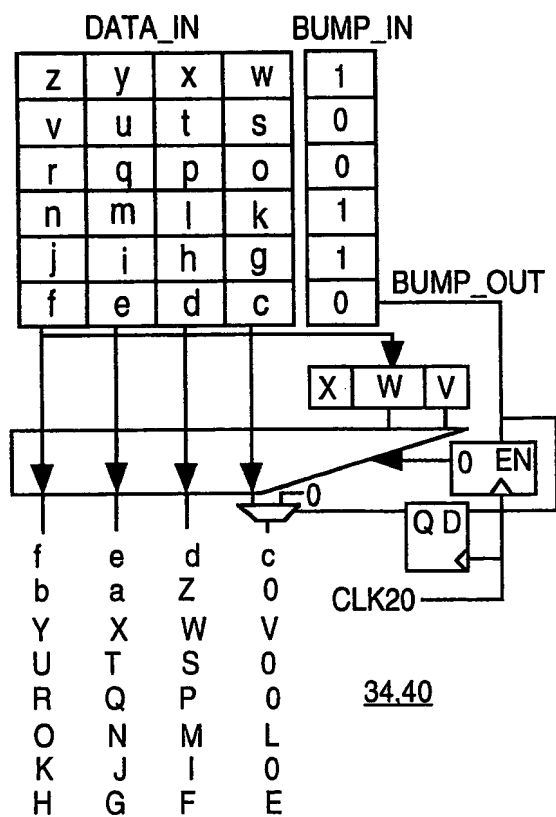
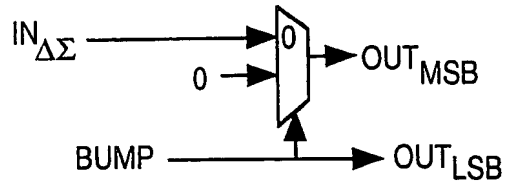
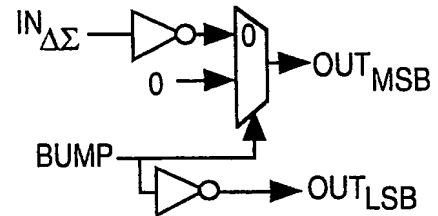


FIG. 38A

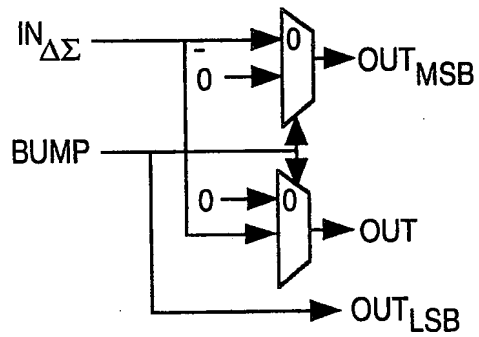
UNSIGNED:

**FIG. 38B**

SIGNED:

**FIG. 38C**

UNSIGNED:

**FIG. 38D**

SIGNED:

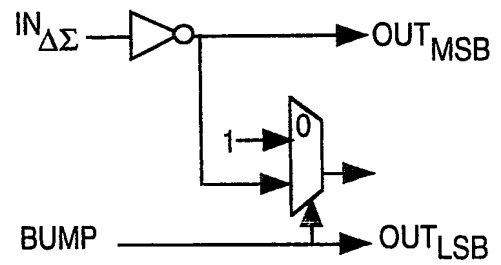


FIG. 39

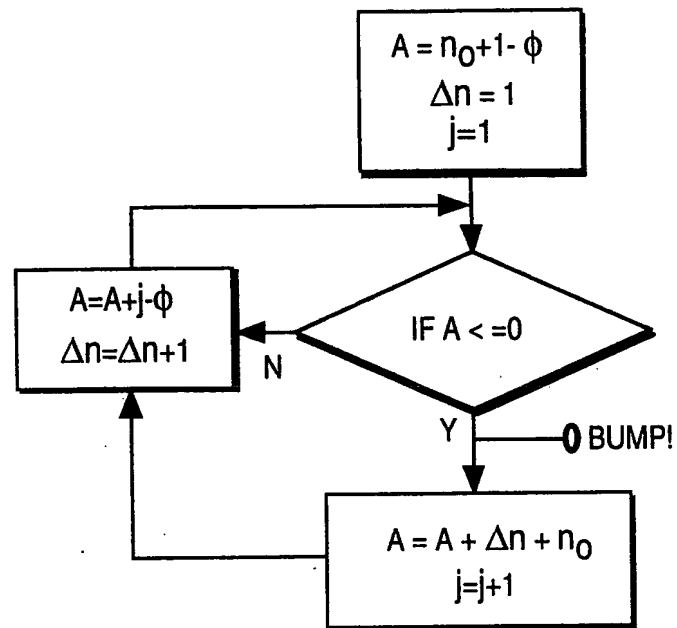


FIG. 40

